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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,109	02/20/2004	Seth A. Lieffort	59608US002	6913

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EXAMINER	
NGUYEN, TUAN HOANG	
ART UNIT	**PAPER NUMBER**
2618	

NOTIFICATION DATE	DELIVERY MODE
01/31/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/784,109	LIEFFORT ET AL.	
	Examiner	Art Unit	
	Tuan H. Nguyen	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 17-25* is/are rejected.

7)☒ Claim(s) *16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 11/14/2007 with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3-6, 9-12, 14-15, 17, 19, 22-23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (US PAT. 6,714,121) in view of Kunz (US PAT. 6,127,989) and further in view of See (US PAT. 6,285,327).

Consider claim 1, Moore teaches a radio frequency identification (RFID) system comprising: an antenna that forms an electromagnetic field at or above a threshold level necessary for communication with RFID tags, wherein the antenna has a substantially planar form (figs. 1A, 1B, and 5 col. 5 lines 38-46 and col. 8 lines 37-42 i.e., in figures 1A, 1B, a RFID system comprising a RFID tag having a dimension, a loop antenna

formed on a printed circuit board, and having a plurality of conductive concentric loops spaced a part by a distance. The electrical coupled to the loop antenna to produce current is inherent).

Moore does not explicitly show a substantially-contiguous conductive shield positioned a distance from the antenna within a plane parallel to the antenna to define an outermost region of a communication zone within the plane parallel to the antenna.

In the same field of endeavor, Kunz teaches a substantially-contiguous conductive shield positioned a distance from the antenna within a plane parallel to the antenna to define an outermost region of a communication zone within the plane parallel to the antenna (fig. 2 col. 1 lines 42-56 i.e., in figure 2, an integrated circuit and antenna coil, and a conductive shield 20 around the antenna coil).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use, a substantially-contiguous conductive shield positioned a distance from the antenna within a plane parallel to the antenna to define an outermost region of a communication zone within the plane parallel to the antenna, as taught by Kunz, in order to provide the loop antenna with a conductive shield for the purpose of protecting the antenna device against mechanical stress or corrosion.

Moore and Kunz, in combination, fail to teach the conductive shield has a width that extends in the plane parallel to the antenna such that the electromagnetic field at any region beyond the conductive shield is below the threshold level.

However, See teaches the conductive shield has a width that extends in the plane parallel to the antenna such that the electromagnetic field at any region beyond the conductive shield is below the threshold level (col. 12 line 48 through col. 13 line 4).

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to incorporate the disclosing of See into view of Moore and Kunz, in order to decrease the interaction of an internal antenna with other elements or conductors in a wireless device, which otherwise degrades performance.

Consider claim 17, Moore teaches a method comprising: providing an antenna that forms an electromagnetic field that defines a communication zone in which RFID tags can be read, wherein the antenna has a substantially planar form (figs. 1A, 1B, and 5 col. 5 lines 38-46 and col. 8 lines 37-42 i.e., in figures 1A, 1B, a RFID system comprising a RFID tag having a dimension, a loop antenna formed on a printed circuit board, and having a plurality of conductive concentric loops spaced a part by a distance. The electrical coupled to the loop antenna to produce current is inherent).

Moore does not explicitly show that selecting a width of a substantially-contiguous conductive shield such that when the conductive shield is positioned a distance from the antenna within a plane parallel to the antenna to define an outermost region of the communication zone within the plane parallel to the antenna; and positioning the substantially-contiguous conductive shield having the selected width around the antenna a distance from an outer loop of the antenna.

In the same field of endeavor, Kunz teaches selecting a width of a substantially-contiguous conductive shield such that when the conductive shield is positioned a distance from the antenna within a plane parallel to the antenna to define an outermost region of the communication zone within the plane parallel to the antenna; and positioning the substantially-contiguous conductive shield having the selected width around the antenna a distance from an outer loop of the antenna (fig. 2 col. 1 lines 42-56 i.e., in figure 2, an integrated circuit and antenna coil, and a conductive shield 20 around the antenna coil).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use, selecting a width of a substantially-contiguous conductive shield such that when the conductive shield is positioned a distance from the antenna within a plane parallel to the antenna to define an outermost region of the communication zone within the plane parallel to the antenna; and positioning the substantially-contiguous conductive shield having the selected width around the antenna a distance from an outer loop of the antenna, as taught by Kunz, in order to provide the loop antenna with a conductive shield for the purpose of protecting the antenna device against mechanical stress or corrosion.

Moore and Kunz, in combination, fail to teach the electromagnetic field at any region beyond the conductive shield is below a threshold level for communication with the RFID tags.

However, See teaches the electromagnetic field at any region beyond the conductive shield is below a threshold level for communication with the RFID tags (col. 12 line 48 through col. 13 line 4).

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to incorporate the disclosing of See into view of Moore and Kunz, in order to decrease the interaction of an internal antenna with other elements or conductors in a wireless device, which otherwise degrades performance.

Consider claims 3 and 19, kunz further teaches the conductive shield comprises planar conductive regions oriented to form a non-shielded inner region, and further wherein the antenna is disposed within the non-shielded inner region and parallel to the planar conductive regions (see fig. 2 col. 2 lines 9-20).

Consider claim 4, kunz further teaches the conductive regions define at least one disconnect area that prevents the conductive shield from forming a closed conductive loop around the antenna (col. 1 lines 28-34).

Consider claim 5, kunz further teaches the antenna comprises one or more conductive loops including an outer loop, and the conductive regions of the conductive shield are located at least a distance D from an outer loop of the antenna that is selected based on a radius of the outer loop (see fig. 2 col. 1 lines 49-57).

Consider claim 6, kunz further teaches the antenna has a first conductive loop having a radius D1 and a concentric second conductive loop having a radius D2, and the conductive regions of the conductive shield are located at least a distance D3 from the outer loop, and wherein D3 is selected as approximately the average of D1 and D2 (fig. 2 col. 2 lines 9-13).

Consider claims 9 and 22, More further teaches the antenna and the conductive shield are mounted to a working surface of an RFID check-in/check-out area (fig. 5a and 5b col. 8 lines 43-52).

Consider claims 10 and 23, More further teaches the working surface has a recessed area and a non-recessed area, and further wherein the antenna is mounted to the recessed area of the working surface and the conductive shield is mounted to the non-recessed area (fig. 5a and 5b col. 8 lines 43-52).

Consider claim 11, kunz further teaches the conductive shield and the antenna are co-planar (fig. 2 col. 2 lines 14-20).

Consider claim 12, kunz further teaches the conductive shield and the antenna are located in two different parallel planes (fig. 2 col. 2 lines 14-20).

Consider claim 14, kunz further teaches the antenna comprises a plurality of conductive loops to produce the electromagnetic field, and wherein the conductive loops are spaced apart at least a distance D that is selected based on a dimension of the RFID tags with which the antenna communicates (fig. 2 col. 2 lines 14-20).

Consider claim 15, kunz further teaches the distance D is selected to exceed a maximum dimension of the RFID tags (fig. 2 col. 2 lines 14-20).

Consider claim 25, kunz further teaches determining a dimension M of the RFID tags for use within an RFID system; selecting a distance D based on the dimension M; and positioning a plurality of conductive loops of the antenna the selected distance D apart for communication with the RFID tag within the RFID system (fig. 2 col. 2 lines 14-20).

4. Claims 2, 7-8, 13, 18, 20-21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of Kunz and See and further in view of Krebs (U.S PUB. 2004/0224135).

Consider claims 2 and 18, Moore, Kunz, and See, in combination, fails to teaches the width of the conductive shield within the plane parallel to the antenna shapes the electromagnetic field to extend substantially in a direction perpendicular to

the antenna, and prevents the electromagnetic field from forming substantially over the conductive shield.

However, Krebs teaches the width of the conductive shield within the plane parallel to the antenna shapes the electromagnetic field to extend substantially in a direction perpendicular to the antenna, and prevents the electromagnetic field from forming substantially over the conductive shield (figs. 3-5 page 3 [0034] and page 4 [0035]).

Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to incorporate the disclosing of Krebs into view of Moore, Kunz, and See, in order to allow the reading of desired RFID tags while preventing the reading of undesired RFID tags (Krebs abstract and page 1 [0008]).

Consider claim 7, Krebs further teaches each of the conductive regions have respective widths extending outward from the antenna, and further wherein the widths are selected based at least in part on a threshold level of the magnetic field necessary for RFID communication between the antenna and the RFID tags (page 2 [0023]).

Consider claims 8 and 21, Krebs further teaches the widths are selected to extend sufficiently in directions parallel to and outward from the antenna to prevent the electromagnetic field from forming in or above the conductive regions until the strength of the magnetic field reduces to below the communication threshold (page 2 [0024]).

Consider claims 13 and 24, Krebs further teaches an RFID interrogation device coupled to the antenna, wherein the interrogation device interrogates the RFID tags to obtain information Consider associated articles; and a computing device to process the information retrieved from the RFID interrogation device (page 2 [0022]).

Consider claim 20, Krebs further teaches selecting each of the widths of each of the conductive regions based at least in part on the threshold level of the magnetic field necessary for RFID communication between the antenna and the RFID tags (page 2 [0023]).

Allowable Subject Matter

5. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any response to this action should be mailed to:

Mail Stop_____ (Explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Facsimile responses should be faxed to:

(571) 273-8300

Hand-delivered responses should be brought to:

Customer Service Window

Randolph Building

401 Dulany Street

Alexandria, VA 22313

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Nguyen whose telephone number is (571)272-8329. The examiner can normally be reached on 8:00Am - 5:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maung Nay A. can be reached on (571)272-7882882. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information Consider the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan Nguyen
Examiner
Art Unit 2618

T.N

NAY MAUNG
SUPERVISORY PATENT EXAMINER